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July 11, 2011

Mr. William Sy
EPA QA Officer
U.S. Environmental Protection Agency
2890 Woodbridge Avenue
Edison, New Jersey 08837

PROJECT: Region 2 RAC 2 Contract No.: EP-W-09-002
Work Assignment No.: 023-RARA-02PE

DOCUMENT No: 3320-023-00936

SUBJECT: Field Planning Meeting Agenda
Remedial Action Well Installation Activities
Old Roosevelt Field Contaminated Groundwater Area Site,
Garden City, New York

Dear Mr. Sy:

CDM Federal Programs Corporation (CDM) is submitting the Field Planning Meeting Agenda with signatures of attendees for the installation of Supplemental Monitoring Wells at the Old Roosevelt Field Site in Garden City, New York. The field planning meeting agenda and signatures of attendees are attached.

If you have any questions regarding this submittal, please contact me at (212) 377-4536.

Very truly yours,

CDM FEDERAL PROGRAMS CORPORATION

Jeniffer Oxford
RAC 2 QA Coordinator

Enclosures

cc: H. Eng, EPA (Letter Only)
C. Kwan, EPA
J. Litwin, CDM (Letter Only)
T. Mathew, CDM
Document Control



Program/Task: RAC2- PLANNING

Subject of Training: Field Planning Meeting
for Old Roosevelt Field RA
Well Installation

Date/Time: July 14, 2011 @ 10am

Location: Teleconference

Instructor(s): MIKE EHNOT

[illegible]

12/2005

**Field Planning Meeting
RA Field Program: Monitoring Well Installation
Old Roosevelt Field Contaminated Groundwater Site
Garden City, New York
July 11, 2011**

SITE BACKGROUND

The site is an area of groundwater contamination within the Village of Garden City in central Nassau County, New York. The site is located on the eastern side of Clinton Road, south of the intersection with Old Country Road, and includes the area of the former Roosevelt Field airfield (Figure 1). Chlorinated solvents, tetrachloroethene (PCE) and chloroethene (TCE) were used at the former Roosevelt Field airfield during and after World War II. Direct discharge of PCE and TCE to the ground surface, a common practice at that time, most likely resulted in the groundwater contamination.

The former Roosevelt Field airfield area is currently developed as a large retail shopping mall with a number of restaurants, and a movie theater. Several office buildings (including Garden City Plaza) are on the western perimeter of the mall and share parking space with the mall. A thin strip of open space along the eastern side of Clinton Road (known as Hazelhurst Park) serves as designated parkland and a buffer between the residential community on the west side of Clinton Road and the mall complex. Two municipal supply well fields are located south (downgradient) of the former airfield: the Village of Garden City public supply wells GWP-10 and GWP-11 on the eastern side of Clinton Road; the Garden City public supply wells are contaminated with PCE and TCE, and have been outfitted with air strippers. The Village of Hempstead Wellfield located approximately one mile south of the Garden City supply wells. Two recharge basins are directly south of the mall/office area. One basin is known as Pembroke Basin and is on property owned by the mall. The second basin is Nassau County Recharge Basin number 124.

The 2007 ROD selected groundwater extraction, ex situ treatment and discharge of treated water to Nassau County recharge basin #124 as the remedy. A performance based remedial design (RD) was completed in 2009. In the RD, sampling and analysis requirements were specified for the implementation of the remedial action.

In 2010, three extraction wells were installed to capture the contaminant plume without significantly impacting the pumping capacity at Garden City wells.

FIELD PROGRAM OVERVIEW

1. Objectives of Field Work: To install three monitoring wells to supplement existing wells to further delineate the southern extent of the contaminant plume.
2. Project Support Area: 249-251 Clinton Road, Garden City, NY
3. Field Program
Monitoring Well Installation (see Field Change Request #8 & Appendix D of the QAPP)
 - Three monitoring wells:
 - SVP-14 – total depth approximately 545 feet below ground surface (bgs)
 - MW-08D – total depth approximately 535 feet bgs
 - MW-12S – total depth approximately 110 feet bgs

**Field Planning Meeting
RA Field Program: Monitoring Well Installation
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- SVP-14 Drilling Method- advance a nominal 14-inch diameter borehole, via mud rotary drilling, and install a 10-inch diameter carbon steel casing to 80 feet bgs; advance a nominal 10-inch diameter borehole via mud rotary drilling to a final borehole depth of 545 feet bgs.
- MW-8D & MW-12S Drilling Method-advance nominal 12-inch diameter borehole, via mud rotary drilling, and install an 8-inch diameter carbon steel casing to 80 feet bgs; advance a nominal 8-inch diameter borehole via mud rotary drilling to a final borehole depth of 535 feet and 111 feet bgs, respectively. 4-inch diameter stainless steel well
- SVP-14 will have ten 5-foot length well screens and MW-8D & MW-12S each will have a 20-foot length well screen
- Westbay well installation at SVP-14
- Well development

4. IDW Management

- Drilling mud and cuttings will be transferred to 20-cubic yard roll off containers staged at each well location; liquid will be pumped off and transferred to 21,000 stored at the staging area; Seacoast will collect soil samples from each roll off container for waste characterization and off-site disposal
- Development water will be transferred to a 21,000-gallon water tank placed at the staging area; Seacoast will collect a water sample from the tank for waste characterization and off-site disposal
- PPE will be stored in a 55- gallon drum

QA/QC

1. Applicable project documents:

- Final QAPP dated March 14, 2008. Approved July 18, 2008
- Field Change Request #8
- Health and Safety Plan – June 19, 2008
- Drilling Scope of Work – March 2010
- IDW Scope of Work - March 2010

PROJECT ROLES AND RESPONSIBILITIES

1. EPA: Caroline Kwan, EPA RPM
2. CDM: Thomas Mathew, PM
Ali Rahmani, Project Engineer
Lisa Campbell, Project Geologist
Mike Ehnot, FTL
3. Subcontractors
Drilling: Uni-Tech
IDW: Seacoast Environmental
Surveyors: GEOD Corporation

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RA Field Program: Monitoring Well Installation
Old Roosevelt Field Contaminated Groundwater Site
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COMMUNICATION WITH STAKEHOLDERS/PROPERTY OWNERS/PUBLIC

1. State and Local Government Agencies
 - a. NYSDEC
 - b. NYSDOH
 - c. Nassau County DOH
 - d. Village of Garden City
2. Property Owners
 - a. Village of Garden City (Frank Koch, Water Department)
3. General Public

Dealing with public/media - (1) Caroline Kwan (EPA RPM) will be the first to contact property owners about any issues concerning the site. She will also be the main contact for the public (2) Field team refers questions from public to the FTL. (3) With public, FTL briefly states what we are doing, and directs public to Caroline Kwan for further information. With media, FTL directs reporters to Caroline Kwan.

NOTE: Under NO CIRCUMSTANCES, shall any member of the field team discuss site activities with the media.

4. Property Access – all access has been obtained by EPA

HEALTH AND SAFETY

1. Level of Protection – Level D
2. Contaminants and Hazards of Concern – PCE, TCE; vehicular traffic; heavy machinery, slips/trips/falls
3. Health and Safety Instruments – PID
4. OSHA required training documentation – 40-hour OSHA, 8-hour refresher, Site Supervisor, First Aid/CPR
5. Hospital Route and Emergency Numbers
6. CDM H & S program manual, HASP, and MSDS sheets

SCHEDULE

1. SVP-14 Well Installation including Westbay well installation, and well development
2. MW-8D Well Installation and well development
3. MW-12D Well Installation and well development
4. Groundwater Sampling (*to be covered during a separate field planning meeting*)

FIELD CHANGE REQUEST No. 8
ADDITIONAL WELL INSTALLATION

Old Roosevelt Field Contaminated Groundwater Area Site
Supplemental Remedial Design
Garden City, NY

Field Change Request

Date: January 17, 2011

Request No.: 8

FCR Title: Additional Well Installation; Round 5 Groundwater Sampling Event; Metals and Mercury Analytical Method Update

Description: This Field Change Request (FCR) describes the installation of three additional wells, followed by a groundwater sampling event (Round 5) at the Old Roosevelt Field Contaminated Groundwater Area Site. This additional work is also described in the March 19, 2010 CDM Work Plan Letter submitted to EPA.

CDM installed two monitoring wells (SVP-12 and SVP-13), followed by a groundwater sampling event (Round 4) in 2009, as described in the February 16, 2009 Addendum No. X to the Final QAPP (dated March 14, 2008). Following review of the analytical results from the Round 4 groundwater sampling event, Environmental Protection Agency (EPA) and CDM determined that additional wells are needed to delineate the extent of the volatile organic compounds (VOCs) in the southern portion of the groundwater plume. This FCR documents the changes to the February 16, 2009 QAPP Addendum to account for the three additional wells and the Round 5 groundwater sampling event. This FCR also addresses the method change for TAL metals and mercury analysis from ILM05.4 to ISM01.2, as directed by EPA Regional Sample Control Center.

Reason for Deviation: Analytical results of the 2009 groundwater sampling event revealed that additional data was needed at the SVP-8 and SVP-12 well locations. Additionally, groundwater data was needed at a location between SVP-6, SVP-7, SVP-8, and SVP-12, to delineate the contaminant plume.

At SVP-8, the bottommost sampling port was installed at 435 feet below ground surface (bgs). However, VOC contaminant concentrations above the project action limits were detected in the bottom five sampling ports. Therefore, groundwater data is needed at this locale at a depth greater than 435 feet bgs to delineate the horizontal extent of the contaminant plume.

At SVP-12, the uppermost sampling port was installed at 245 feet bgs; however, VOC contaminant concentrations above the project action limits were detected at the upper sampling ports. Therefore, groundwater data is needed at a shallow depth at this locale, to delineate the horizontal extent of the contaminant plume.

VOC contaminant concentrations above the site specific standard were detected in several ports at SVP-7, SVP-8 and SVP-12; however, only one port at SVP-6 had a VOC contaminant above

the project action limit. Therefore, groundwater data is needed at a location between these four wells to delineate the vertical and lateral extent of the contaminant plume.

Following installation of the three new wells, a groundwater sampling event including all onsite wells will be conducted to obtain groundwater data.

The EPA CLP changed the mercury and metals analytical method to address lower reporting limits and additional techniques available by the new method.

Recommended/Modification: Install two conventional monitoring wells (MW-8D and MW-12S) and one multi-port monitoring well (SVP-14). MW-8D and MW-12S adjacent to SVP-8 and SVP-12, respectively. MW-8D, MW-12S and SVP-14 well locations are shown on Figure 1.

MW-8D and MW-12S well installation will consist of borehole drilling, surface casing installation and casing/screen installation. MW-8D and MW-12S boreholes will be drilled by advancing a nominal 12-inch diameter drill bit, via mud rotary drilling methods, to a depth of approximately 80 feet bgs. Then an 8-inch diameter carbon steel surface casing will be installed to a depth of 80 feet and grout will be pumped into the borehole annulus via tremie pipe from 80 feet and extending up to the surface. Boreholes will be completed by advancing a nominal 8-inch diameter drill bit, via mud rotary drilling, to a depth of 535 feet bgs for MW-8D and to a depth of 110 feet bgs for MW-12S. Subsequently, a 4-inch inside diameter (ID) Type 304, Schedule 10 stainless steel casing and well screen assembly will be installed into the boreholes. MW-8D and MW-12S will have 20-foot length, 10-slot, stainless steel well screens set at 515 - 535 feet and 90-110 feet depth intervals, respectively. Boreholes will be backfilled by placing Filpro #1 sand into the borehole annulus via tremie pipe, from the bottommost depth and extending upward a minimum of 3 feet above the top of the well screen. Approximately 2 feet of Filpro #00 sand will be added to the borehole annulus, as above, above the Filpro #1 sand. Ultimately grout will be placed into the borehole annulus, as above, from the top of the Filpro #00 sand and extending up to the surface.

SVP-14 well installation will consist of borehole drilling, surface casing installation, casing/screen installation, and Westbay well installation. SVP-14 borehole will be drilled by advancing a nominal 14-inch diameter drill bit, via mud rotary drilling methods, to a depth of approximately 80 feet bgs. Then a 10-inch diameter carbon steel surface casing will be installed to a depth of 80 feet bgs and grouted in the same manner as described above. SVP-14 borehole will be completed by advancing a nominal 10-inch diameter drill bit, via mud rotary drilling, to a depth of 545 feet bgs. Subsequently, a 4-inch ID Type 304, Schedule 10 stainless steel casing and screen assembly will be installed into the borehole. The SVP-14 casing/screen assembly will have 10 five-foot length, 10-slot, stainless steel well screens set at the following depth intervals:

| | |
|-----------------------------|-----------------------------|
| Port 1: 530 feet - 535 feet | Port 6: 250 feet - 255 feet |
| Port 2: 490 feet - 495 feet | Port 7: 185 feet - 190 feet |
| Port 3: 410 feet - 435 feet | Port 8: 145 feet - 150 feet |
| Port 4: 360 feet - 365 feet | Port 9: 100 feet - 105 feet |
| Port 5: 300 feet - 305 feet | Port 10: 45 feet - 50 feet |

SVP-14 borehole will be backfilled by placing Filpro #1 sand into the borehole annulus via tremie pipe, from the bottommost depth and extending upward a minimum of 5 feet above the top of the bottommost screen. A 1:1 mixture of bentonite/Filpro #1 sand slurry will be pumped into the borehole annulus, via tremie pipe, above the Filpro #1 sand and extending up to a depth of 10 feet below the bottom of the next well screen. Subsequently, Filpro #1 sand will be added to the borehole annulus, as above, followed by placement of the bentonite/sand slurry, as above, for each well screen, until Filpro #1 sand is 5 feet above the uppermost screen. The bentonite/sand slurry will be in accordance to Field Change Request #6. [Note: Filpro #1 sand will be placed into borehole annulus adjacent to the well screen and will extend from a depth of approximately 10 feet below the screen bottom to a minimum of 5 feet above the top of the screen.] Ultimately, a 5-foot thick bentonite/sand slurry will be placed above the Filpro #1 sand followed by grout extending up to the surface. Following backfilling, Westbay personnel will install a Westbay multi-port well inside the stainless steel casing/screen assembly and Westbay ports will be installed at depths corresponding to the well screen intervals as stated in QAPP Worksheet#17c.

Well development of the MW-8D, MW-12S, and SVP-14 well screens will be performed in the manner described in Final QAPP Appendix B TSOP 4-3 and Field Change Request #7. The SVP-14 Westbay ports will be developed as stated in Final QAPP Appendix E Subsection Appendix A3.0.

A flush-mount protective casing and well pad will be installed at the surface of each well and top of each well will be fitted with a 4-inch diameter expandable cap.

Note: CDM will perform gamma logging at MW-8D and SVP-14, following casing/screen assembly installation, in the manner stated in Final QAPP Worksheet #17c and described in Appendix B TSOP 3-4.

Conduct the Round 5 groundwater sampling event of onsite wells to obtain groundwater data. Ground water samples will be collected from 21 onsite wells: 14 multiport wells (SVP-1 through SVP-14), 5 single-screen wells (MW-8D, MW-12S, GWX-10019, GWX-10020, and 8068) and 2 supply wells (No. 10 and No. 11). Groundwater samples will be analyzed as follows:

- Trace-Level VOCs: All ports and well samples (124 samples total)
- Inorganics: SVP-14 Port 1 through Port 10 (10 samples total)
- Filtered and Unfiltered Iron & Manganese:
 - SVP-11 (Port 2, Port 4, Port 7, Port 10)
 - SVP-14 (Port 2, Port 4, Port 7, Port 10)
 - MW-12S
 - [18 samples total—9 filtered and 9 unfiltered]
- Total Dissolved Solids, Ammonia, Total Kjeldahl Nitrogen & Hardness:
 - SVP-14 (Port 2, Port 4, Port 7, Port 10)
 - [4 samples each per parameter for 16 samples total]

Groundwater samples will be collected according to procedures stated in Final QAPP Worksheets #17e, #17f and #17h. Quality control tasks, data management tasks, and documentation and records stated in Worksheet #14 will be applicable.

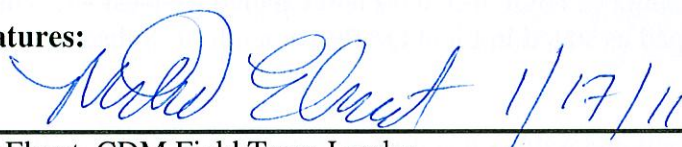
The EPA Contract Laboratory Program has implemented updated inorganic procedures; therefore, method ISM01.2 for mercury and metals groundwater analysis (with the appropriate Modified Analyses numbers) will be used in all future analysis for this project. QAPP Worksheets #12, #15, #20, and #28 and all references to ILM05.4 in the previous QAPPs are hereby superseded by ISM01.2. The QC information and data validation references remain the same.

Impact on Data Quality Objectives: Data quality objectives will be enhanced because groundwater analytical data from these three new wells will help delineate the vertical and lateral extent of the contaminant in the downgradient portion of the plume. Lower detection limits will facilitate better achievement of the project's sensitivity requirements.

RAC II Contract No.: EP-W-09-002

Work Assignment No.: 008-RDRD-02PE

Signatures:

 1/17/11

Mike Ehnot, CDM Field Team Leader

Susan Schofield, CDM Project Manager

cc:

Caroline Kwan, EPA Remedial Project Manager

Susan Schofield, CDM Project Manager

Lisa Campbell, CDM Task Manager

Jeniffer Oxford, CDM Quality Assurance Coordinator

Mike Ehnot, CDM Field Team Leader

CDM Roosevelt Field Team

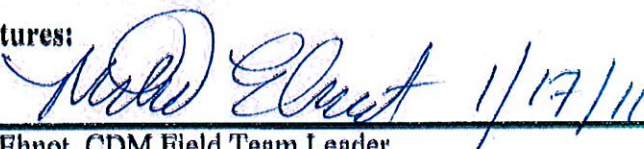
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Susan Schofield, CDM Project Manager

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